DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-007552
Date Inspected: 27-Jun-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Xu Le Feng, Yu Dong Ping	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☐ No ☑ N/A

Bridge No: 34-0006
Component: TOWER

Summary of Items Observed:

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Outside Yard at Vertical Mill:

The QA Inspector randomly observed the vertical mill was in operation and that milling was being performed simultaneously on Skin Plates A through E at the top of Lift 1 East Tower Shaft at elevation 50.30 M and Skin Plates A through E at the bottom of Lift 2 East Tower Shaft at elevation 50.30 M.

The QA Inspector randomly observed that no contract work was being performed in the interior or on the exterior of or Lift 2 East Tower Shaft. The attached photographs provide additional detail.

The QA Inspector randomly observed ZPMC Production personnel utilizing track mounted cutting torches to cut the bevels on the longitudinal stiffeners outside stiffeners on Lift 1 East Tower Shaft Skins C and E.

Heavy Equipment Shop Bay 10:

The QA Inspector randomly observed diagonal triangle plates and other tower materials, not stored on dunnage, lying on standing water and under bolt hole drilling operations. The attached photograph provides additional detail. ZPMC production personnel observed the QA Inspector taking photographs of the improperly stored

materials and stored them properly.

The QA Inspector randomly observed ZPMC welder ID 040489, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-U3c-S-2 to weld the butt seam at WJ NSD1-FASA4-1E/E-40B in Lift 4 North Skin Plate B. The QA Inspector randomly observed ZPMC Quality Control monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 680 amps, 31 volts with a travel speed of 570 millimeters per minute. Weld parameters appeared to comply with contract requirements.

Heavy Equipment Shop Bay 11:

The QA Inspector randomly observed ZPMC welder Cao Xiao Hua ID 056975, utilizing the Submerged Arc Welding (SAW) Process in the 1G (Flat Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-4221-B-U3c-S-1 to weld the butt seams at WJ's SD1-A6002-8-4B. The QA Inspector randomly observed ZPMC Quality Control monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040759, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-67A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040713, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-70A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 053316, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-10A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040775, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-80A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040701, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-93A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040723, utilizing the FCAW Process in the 1G (Flat

Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-29A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 058792, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-86A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 048810, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-TC-U5-F, to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-17A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040669, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3211-TC-U5b-1 to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-99A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder ID 040656, utilizing the SMAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3211-TC-U5b-1 to weld the longitudinal stiffeners to Skin Plate A for Lift 4 East Tower Shaft at WJ ESD1-FASA4-2E/E-33A. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

Comments

WELDING INSPECTION REPORT

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod 13482570045, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer